# ON THE USE OF VARIOUS SHELL THEORIES IN THE ANALYSIS OF AXISYMMETRICALLY LOADED CIRCULAR CONTAINERS.

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**Abstract:** In shell literature there are several theories concerning the behavior of thin shells and a few regarding the behavior of thick and moderately thick shells. This paper is an attempt to bridge the gap that exists in the practicing engineer's mind as to when the validity of the theory of thin shells ceases and when that of thick shells begins. The problem of an axisymmetrically loaded container in the form of a cylindrical shell is analyzed, using both thick and thin shell theories for various values of t/R and a recommendation is made regarding the bifurcation point between thin and thick shell theories.